Computing

Willow Bank Infant School

Vision

At Willow Bank Infants, we aim to develop all pupils' computing skills to prepare them for the future in a digital world. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day lives of our children. We want all children to have the skills and knowledge to enjoy and use technology safely and responsibly.

Intent – We aim to...

At our school we want pupils to be MASTERS of technology. We put a particular focus on staying safe online, regularly reinforcing to the children how to use technology safely and respectfully and what to do if they have any concerns. We want our pupils to understand that there is always a choice. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We believe a cross-curricular approach to teaching computing will enhance and extend the children's learning across the whole curriculum and in doing so will enable them to be creative, confident, independent, digital-literate learners.

Implementation – How do we achieve this?

At Willow Bank Infants, we use Purple Mash as a cohesive scheme of work addressing the statutory aspects of the National Curriculum. In the Early Years the approach is through cross-curricular learning with an emphasis on hands on experiences and is assessed through the Understanding the World, Early Learning Goal. Teaching is through context-based and role play experiences using many resources such as iPads and programmable toys. In years 1 and 2, children receive weekly Computing lessons that are planned and delivered through the Purple Mash software. Some units might be supplemented or replaced with other schemes such as the NCCE Teach computing framework or additional software/hardware.

Three strands make up our Computing curriculum: Computer Science, Digital Literacy and Information Technology.

E-safety safety is visited at the start of every lesson. The school uses Project Evolve to deliver half termly E- Safety lessons, at an age appropriate lesson, based on the Education in a Connected World framework.

Computer Science

Children learn to:
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.

Information Technology

Children learn to:
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Digital Literacy

Children learn to:
Recognise common uses of information technology beyond school. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Tech talk

Children learn and use a range of technical vocabulary. Computing vocabulary and its definitions is introduced/revised during each session. Children are give 'Tech Talk' time to discuss and explain vocabulary with a partner and the class.

E-Safety

Half termly lessons taught through Project Evolve. E-safety reminders at the start of lessons.

Implementation ctd. – How do we achieve this?

Assessment

Learning is monitored through formative assessment opportunities against the learning objectives such as observing an approach to a task, completing a quiz, or asking children to assess their own learning through thumbs up/thumbs down questions. This is informs the teacher of individuals' strengths and weaknesses and allows them to target key areas and individuals through verbal feedback immediately or in the next lesson/unit. Summative assessment judgements are made against the KS1 outcomes and recorded yearly on Insight.

Lowest 20%

Lessons will be scaffolded to support children. Carefully paired talk partners will allow children to support and encourage each other. Regular 'Tech Talk' will support the over-learning and understanding of new vocabulary along with vocabulary mats being available for each unit.

Professional development

In June, all staff received CPD from Purple Mash, delivered by Kathy Smedley, about how to use Purple Mash software for planning and delivering Computing lessons. Staff also received in-house training from Sarah Clements about using Project Evolve to deliver age-appropriate E-safety sessions.

SEND and Disadvantaged Progress

The content of the curriculum is not reduced for children with SEND and disadvantaged pupils, rather the manner in which they access the curriculum, is amended to suit their needs. Any adaptations concentrate on how the content is taught. Visual and audio adaptations to software can be made with Purple Mash. Pre-teaching is used to introduce key vocabulary before lessons and the complexity or choices on the software can be altered.

Cultural capital, inclusion and diversity

Children will learn about a range of areas where computing and technology can be used for a purpose in everyday life. For example, they will have opportunities to program, sequence, record and import sound as a way of music-making. They will publish and present work, create and interrogate databases allowing an insight into the use of computers in the wider world.

We also ensure that pupils know the importance of using technology safely and respectfully, becoming safer digital citizens. This will leave them prepared for the possible pitfalls of an increasingly connected world, but excited by the infinite opportunities it has to offer.

Curriculum links

Computing can be taught through or used to enhance the teaching of many other curriculum subjects. For example, simple spread sheets and data collection programs can be used within Maths learning. 2 Simple software can be used for creating story maps in English (2Creat a Story) or creating sounds and rhythms (Busy Beats) in music. Safe use and planned navigation of the internet can help children understand the world around them, eg, using Google Earth to explore maps and aerial views in Geography.

Impact – How will we know we have achieved?

Children see the digital world as part of their world, extending beyond school, and understand that they have choices to make.

They are confident using a range of hardware and software and will produce high-quality purposeful work.

They are aware of how to stay safe online and are confident and respectful digital citizens.

Children use digital and technological vocabulary accurately.

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